

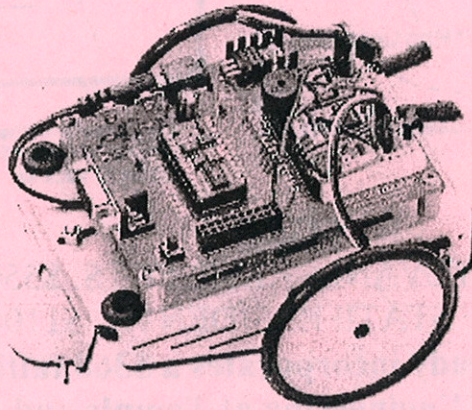
Calling all Roboteers!

TEMPLE UNIVERSITY ELECTRICAL AND COMPUTER ENGINEERING

A COLLEGE ENGINEERING COURSE FOR HIGH SCHOOL STUDENTS SUMMER 2010

EE 001 - INTRODUCTION TO ELECTRICAL AND COMPUTER ENGINEERING 2 credit hours

Learn how to build programmable mobile robots and compete with other high school students in the Delaware Valley, get a great introduction to a college course in Electrical and Computer Engineering and earn 2 college credits that can be used for credit at institutions of higher education.



JULY 6th, through AUGUST 5th, 2010

TEMPLE MAIN CAMPUS: Engineering Building, 1947 N. 12th Street

Tuesday, Wednesday, Thursday: 9:30-11:45 AM

This course will introduce students to some of the basic concepts of electrical and computer engineering. It will also provide extensive laboratory experience where the students will build autonomous, programmable mobile robots also give a good overview of the different specialties within the fields of electrical and computer engineering. Topics to be covered are:

1. Electrical components: Resistance, capacitance and electromagnetic induction coil.
2. Electronic components and integrated circuits: Diodes, transistors, operational amplifiers and timer circuits.

- The course requires no homework or exams. Grading is based upon how you do in the "Journey Competition" shown below. Temple professors, graduate and undergraduate students will instruct you every step of the way in the state of the art electronics laboratory. Each robot is to navigate the course shown below starting at the left and navigating to the finish line at the bottom right. This is identical to a courses used in international robotic competitions. If you would like to see a video clip of years past course activities, schedule, and weekly schedule go to http://astro.temple.edu/~helferty/ee01_06/index.

The Journey area will be constructed of plywood with the exception of the hill and circle, which will be "Sinter", a flexible plastic product. Black lines will be two inches wide. Surfaces may be painted flat white.

Diagram labels and dimensions:

- Overall width: 12'
- Overall height: 12'
- Left side dimensions: 12" (top), 1" (side), 18" (height), 10" High Barrier (width), 1" (bottom).
- Top dimensions: 8' (left), 8' (right).
- Right side dimensions: 12" (top), 12" (side), 18' (bottom).
- Internal dimensions: 1' (left), 1' (right), 18" (height), 8' (width).
- Labels: "Water" (top and bottom), "12" HILL WITH WATER UNDER HILL", "12' High Undulating Hill", "Approximate 6' length for hill", "Upright barrier will be ten inches high and painted flat white with an inside and outside 2" black line.", "Finish Line".
- Note: "Two inch deep pit with 2" black line defining edge of pit."

OUT OF STATE RESIDENTS: \$1100

Deadline for returning application form is MAY 12th, 2010.

e-mail: helferty@temple.edu